

**POLISHING DEVICE FOR CMP AND CMP DEVICE SYSTEM**

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**International Class (IPC Edition 6):**

- B24B-037/00
- B24B-037/04
- B24B-049/12
- H01L-021/304

**JAPIO Class:**

- 25.2 (MACHINE TOOLS--- Cutting & Grinding)
- 42.2 (ELECTRONICS--- Solid State Components)

**JAPIO Keywords:**

- R002 (LASERS)
- R052 (FIBERS--- Carbon Fibers)
- R057 (FIBERS--- Non-woven Fabrics)
- R124 (CHEMISTRY--- Epoxy Resins)
- R129 (ELECTRONIC MATERIALS--- Super High Density Integrated Circuits, LSI & GS)

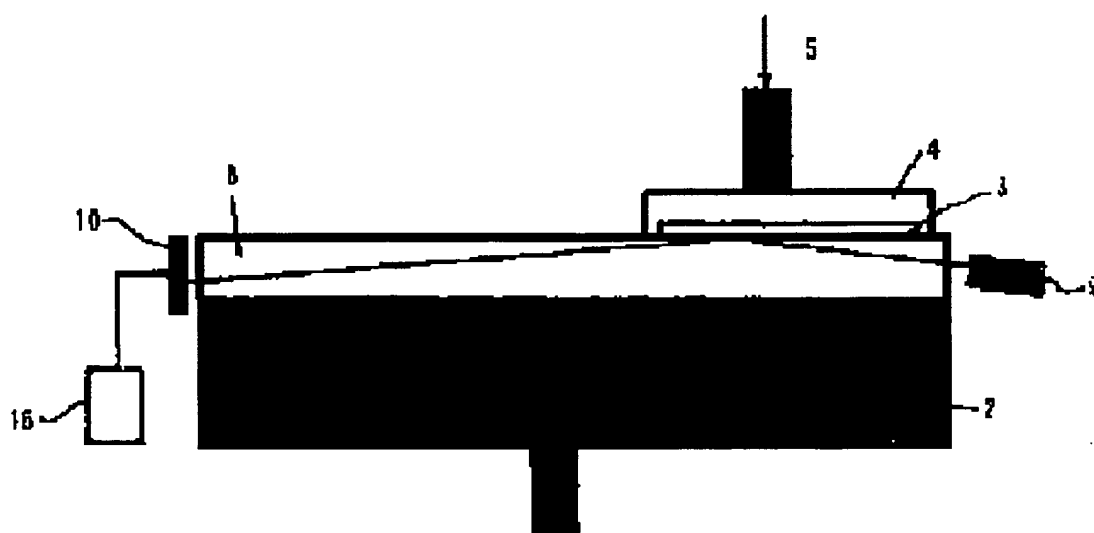
**Abstract:**

**PROBLEM TO BE SOLVED:** To improve surface accuracy and yield by providing a polishing monitoring system for confirming the surface polished quantity distribution of a polished object, film thickness distribution or the maximum value of the polished quantity, and completing polishing in case of the distribution satisfying a specified condition or the maximum value of the polished quantity reaching the tolerance limit value.

**SOLUTION:** A polishing monitoring system used for flattening polishing of a semiconductor device is provided with a light emitting part 9 for emitting light from one end face side of a polisher 8 formed of transparent material, toward the other end face, a light receiving part 10 for detecting reflected light

taken off from the surface of a polished object 3 through the polisher 8, and a polishing monitoring part 16 for confirming the surface polished state of the polished object 3 on the basis of the change of reflected light detected by the light receiving part 10 and detecting a polishing end point. A wafer within the reference polished state confirmed by the polishing monitoring system is judged to be finished with polishing by a polishing control system and put forward to the following cleaning process, but polishing is continued on wafers other than this wafer until the polished state is within the reference.

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JAPIO

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